

Cold Shrink

# Inline Joint

3M™ QS 200



## PRODUCTION DESCRIPTION

The 3M QS 200 is a cold shrink, one-piece multilayer silicone rubber splice body with integrated electrode, stress control device, insulation and outer semi-conductive layer.

The 3M QS 200 silicone splice body is delivered on a removeable plastic supporting core.



During the installation the ribbon core is unwound counter clockwise, allowing the splicebody to shrink onto the cable joint. The applied permanent radial pressure guarantees a reliable function over the entire lifetime.

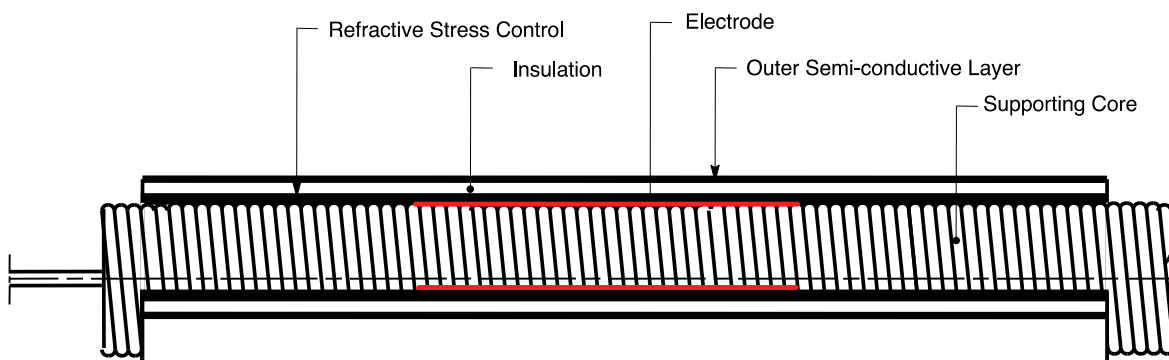
## SPLICE BODY CONSTRUCTION

- ▶ The outer semi-conductive layer re-establishes the cable screen.
- ▶ The insulation of the splice body replaces the cable insulation across the entire splice.
- ▶ The integrated stress control element provides the proper electric field distribution.
- ▶ The integrated, semi-conductive electrode forms a faraday cage over the connector.

## FEATURES

The versatile design of the prefabricated one-piece splice bodies allows installation on a wide range of cable sizes and types.

- ▶ Designed to fit all standard mechanical and compression connectors.
- ▶ Cold Shrink technology ensures quick, easy and tool-free installation.
- ▶ Excellent material properties allow the installation of the cold shrink splice body at temperatures ranging from  $-20^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$ .
- ▶ Meets and exceeds CENELEC standard HD 629, as well as IEC 60502-4
- ▶ The integrated, semi-conductive electrode forms a faraday cage over the connector and eliminated the use of tapes or additional molded or metallic electrodes.
- ▶ No heat or flame is needed during splice body installation.
- ▶ Delivered mechanical connector provides an adequate application range.
- ▶ Solderless earth connection by means of copper screen sleeve and constant force springs.
- ▶ Thick walled, medium heat shrinkable outer re-jacketing tubes provide physical protection and moisture sealing of the completed Inline Splices. They can be stacked together providing a short parking position on the cable.
- ▶ No special tools needed during splice installation.





## APPLICATIONS

3M QS 200 Cold Shrink Series Kits are designed for inline splicing up to 36kV U<sub>max</sub> voltage class, single core & three core polymeric power cable systems with copper wire screen according to HD 620 (IEC 60502). Splicing medium voltage power cables of different voltage classes and cross sections is possible.

3M QS 200 Cold Shrink Series Kits includes the Cold Shrink QS 200 silicone splice body with integrated electrode, stress control device, silicone elastomer insulation and outer semi-conductive layer. Also included are connectors, copper screen sleeve, constant force springs. For rebuild the cable outer jacket with 3 options: EPDM rubber Cold Shrink outer tubes, Heat shrinkable outer tubes or Resin Re-jacketing.

Application Range						
Kit Ref.	Cable Dimensions for Polymeric Cables				Connector Dimensions Crimp or Mechanical Connector	
	Diameter over Cable jacket max.(mm)	Diameter over Primary Insulation (mm)	Cross Section (mm <sup>2</sup> )		Diameter max. (mm)	Length max. (mm)
			12/20(24)kV 12,7/22(24)kV	12/20(24)kV 12,7/22(24)kV		
QS200 93-AK 220-1(3)	46	19,1 - 38	50 - 300		38	160
QS200 93-AK 230-1(3)	74	33,4 - 66	400 - 630		68	245
QS200 94-AK 220-1(3)	46	19,1 - 38		35 - 240	38	160
QS200 94-AK 230-1(3)	74	33,4 - 66		300 - 500	68	245
QS200 93-AK 420-1(3)	46	19,1 - 38	50 - 300		38	160
QS200 93-AK 430-1(3)	74	33,4 - 66	400 - 630		68	245
QS200 94-AK 420-1(3)	46	19,1 - 38		35 - 240	38	160
QS200 94-AK 430-1(3)	74	33,4 - 66		300 - 500	68	245



## PRODUCT TEST

Tests conducted in accordance with CENELEC HD 629.1 S2

Maximum Voltage Class (Um):	24kV	36kV
AC 5 Minute Voltage Withstand:	57kV	85.5kV
AC 15 Minute Voltage Withstand:	32kV	47.5kV
DC 15 Minute Voltage Withstand:	76kV	114kV
Impluse voltage test:	125kV	194kV
Thermal Short Circuit (Screen, 2 stresses.)	5.1 kA/2s	5.1 kA/2s
Short Circuit Test (Conductor, 2 stresses.)	250°C	250°C

## SELECTION GUIDE

QS 200 Technical Information	Portfolio Overview	Kit Coding / Voltage Class			
		12/20(24)kV	12,7/22(24)kV	19/33(36)kV	20/35(36)kV
Application	1-core Polymeric Full Cold Shrink	QS200 93-AK 620-1 QS200 93-AK 630-1		QS200 94-AK 620-1 QS200 94-AK 630-1	
	1-core Polymeric Heat Shrink Re-jacketing	QS200 93-AK 220-1 QS200 93-AK 230-1		QS200 94-AK 220-1 QS200 94-AK 230-1	
	1-core Polymeric Resin Re-jacketing	QS200 93-AK 420-1 QS200 93-AK 430-1		QS200 94-AK 420-1 QS200 94-AK 430-1	
	3-core Polymeric Heat Shrink Re-jacketing	QS200 93-AK 220-3 QS200 93-AK 230-3		QS200 94-AK 220-3 QS200 94-AK 230-3	
	3-core Polymeric Resin Re-jacketing	QS200 93-AK 420-3 QS200 93-AK 430-3		QS200 94-AK 420-3 QS200 94-AK 430-3	